Amendments to the Specification

Page 1, after line 2, amend as follows:

FIELD OF THE INVENTION

The present invention relates to a method for measuring the spin in an optical fibre by irradiating an optical fibre with light so as to form an interference pattern.

Page 1, after line 5, amend as follows:

DESCRIPTION OF RELATED ART

Such a method is known per se from European patent no. 0 785 913 which has been granted to the present applicants. According to the method disclosed therein, as described in embodiment 4, the outer surface of the preform from which the fibre is drawn is provided with a short score-line extending substantially parallel to the preform's longitudinal axis. Subsequently, a test optical fibre is drawn from this scored portion of preform by heating the preform to a temperature above the plasticizing temperature thereof. Since a rotation is imparted to the fibre during said drawing process, the score-line will rotate along with the fibre material when spin is being imparted to the fibre. When the protective coating is chemically removed from such a test optical fibre and the fibre is subsequently transversely irradiated by a laser source, for example a HeNe laser, the laser light will produce a diffraction pattern on a screen disposed behind the irradiated portion of the fibre. The presence of lateral asymmetry, viz. the score-line which is also present in the optical fibre that is formed in this manner, produces a characteristic diffraction pattern with a clear visually detectable intensity maximum. Said intensity maximum undergoes a visible shift upon slow manual rotation of the fibre around its longitudinal axis. By slowly moving the laser source slowly along a given length of the fibre and subsequently monitoring the angle through which the fibre is to be hand-rotated so as to keep the diffraction pattern constant, it is possible to measure the spin amplitude, viz. the maximum spin angle which has been

imparted to the fibre, and the so-called spatial period. Thus it is possible to determine the number of rotations per unit length of the optical fibre on the basis of the interference pattern or diffraction pattern. Such a method has appeared to be labour-intensive and time-consuming in practice. Moreover, such a method must be carried out separately for each drawing tower, because each drawing tower possesses characteristic process parameters. Another drawback is the fact that such a measurement is not carried out during the actual drawing process, so that any undesirable deviations in the spin of the optical fibre cannot be directly corrected.

Page 3, after line 20, amend as follows:

SUMMARY OF THE INVENTION

According to the invention, the method as referred to in the introduction is characterized in that the ovality of the optical fibre, which results in a continuously changing interference pattern, is used for determining the spin in the optical fibre.

Page 6, after line 14, amend as follows:

DESCRIPTION OF THE DRAWING

The present invention will now be explained by means of an example, wherein the interference pattern signal is shown in the appended figure.

Page 6, after line 16, amend as follows:

DESCRIPTION OF THE PREFERRED EMBODIMENT

The reference signal that is shown in the appended figure has been obtained by irradiating the optical fibre with light in a direction perpendicularly to the direction of movement thereof. A device consisting of two pairs of wheels is used as the device for imparting the spin to the optical fibre. It appears from the figure that the interference signal is periodically interrupted, which is indicated with distance A. This Interruption is caused by the reversing of the wheels of the aforesaid device. Set off on the x-axis is the number of

milliseconds per division. On the basis thereof it is possible to calculate the time that is needed for reversing the wheels of the device for imparting the spin to the optical fibre. The appended figure furthermore schematically shows a distance 8, within which distance B two downwardly extending peaks are shown. Said two peaks represent a full rotation of the optical fibre. Thus the number of rotations of the optical fibre can be calculated within one turn of the wheels. In addition, it is possible to calculate from this figure the number of optical fibre rotations that are presented to the oven where the optical fibre is drawn by means of plastic deformation from the preform that has been heated to the plasticizing temperature. Thus it is possible to compare this value with the number of rotations that are actually frozen into the fibre. The figure furthermore shows a distance C, which distance C, also called amplitude, depends on the non-circularity or ovality of the preform cladding. The number of actual rotations being generated by the device for imparting the spin to the optical fibre can be determined from the figure by means of the measured interference signal. Only a number of said generated rotations are frozen in the optical fibre. Since the number of generated rotations is not the same as the number of rotations that are frozen into the fibre, a so-called efficiency constant, RC, can be defined, wherein: